Labour Market and
Economic Indicators Dashboard

Mining, Oil and Gas Industry

2006

Building and Educating
Tomorrow's Workforce

Alberta

Mining, Oil and Gas Industry

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Introduction

By March 2006, 34 of 53 occupational groups tracked by the Alberta government showed an unemployment rate of three per cent or less, indicating skill and labour shortages. This document presents a series of economic indicators to identify labour and skill shortages or surpluses in industry sectors.

Indicators such as the unemployment rate, vacancy rate, hiring difficulty rate and demand-supply ratio[1] are used to determine the presence of shortages or surpluses now and in the future. This tool should not be used to make decisions. Instead, the intent of this dashboard is to spark discussion and give a snapshot of where the occupational cluster is likely to be within the next 10 year period. Additional provincial labour market information, including regional information, can be obtained at www.lmaprodvip.com to assist with decision making.

What is a shortage?

Shortages were determined by looking at the unemployment, vacancy, and hiring difficulty rates, as well as the demand-supply ratio for a number of occupational clusters within sectors. Occupations are sorted by industry sector as outlined in Appendix A.

This booklet uses a traffic light system to help define shortages, based on the following:

Unemployment: If the unemployment rate of an occupation is less than three per cent, there is a shortage.

Vacant jobs: If the vacancy rate of an occupation is more than two per cent, there is a shortage.

Hiring difficulty: If the hiring difficulty rate of an occupation is more than 25 per cent, there is a shortage.

Demand and supply of workers: A demand-supply ratio of greater than one indicates a supply shortage while a ratio of less than one indicates a supply surplus.

Occupational clusters are coded red, yellow or green based on the following:[2]

Red – All indicators show shortage OR the vacancy rate is over five per cent and the reported hiring difficulty over 40 per cent.

Yellow – One or more indicators show shortage.

Green – All indictors show a surplus.

[1] See Appendix B for more information about the unemployment rate, vacancy rate, hiring difficulty rate and/or demand-supply ratio.

[2] See Appendix C for more detailed information on the colour coding for each occupation.

Manufacturing

The mining, oil and gas industry is a broad industry that includes coal, electricity, minerals, natural gas, oil, oil sands, and petrochemicals. Energy technologies and services considerations include enhancing oil recovery, oil sands research, coal bed methane technology development, and clean coal technology development.

Industry Challenges and Issues

Although buoyed by very high prices in 2004 and 2005, the conventional oil and gas industry in Alberta is declining as the Western Sedimentary Basin matures.

This has a number of implications:

- there will be a general decrease in overall labour demand, and
- there will be a shift in skill requirements as the industry moves away from wildcat and step-out drilling to enhanced recovery methods.

Other factors that contribute to the labour challenges faced by the mining, oil and gas industry include:

- the sector's vulnerability to fluctuations in world oil prices,
- the challenging working conditions and perceptions of the work being dangerous,
- the seasonal nature of much of the work,
- recruitment challenges such as inadequate community infrastructure, and finding the right skills,
- an education system that is not responding fast enough to meet the demands of industry, and
- relatively high levels of economic activity in other provinces and the U.S that hamper recruitment from other provinces and abroad.

Occupational Cluster	2003[1]	2005	2015
Administrative and Regulatory Occupations	Concern	Concern	Shortage

[1] This information is based on Government of Canada statistics and projections for the North American Industry Classification System (NAICS) major group 23.

[2] The rationale for using 2003, 2005, and 2015 as years to show trend is indicated in Appendix D.

Occupational Cluster	2003	2005	2015
Administrative Services Managers	Concern	Concern	Surplus
Administrative Support Clerks	Surplus	Concern	Surplus
Architects, Urban Planners and Land Surveyors	Shortage	Shortage	Shortage
Auditors, Accountants and Investment Professionals	Concern	Concern	Surplus
Central Control and Process Operators in Manufacturing and Processing	Surplus	Concern	Shortage
Civil, Mechanical, Electrical and Chemical Engineers	Concern	Shortage	Shortage
Cleaners	Surplus	Concern	Surplus

Occupational Cluster	2003	2005	2015
Clerical Occupations, General Office Skills	Surplus	Concern	Surplus
Clerical Supervisors	Concern	Concern	Shortage
Computer and Information Systems Professionals	Concern	Concern	Surplus
Contractors and Supervisors, Trades and Related Workers	Concern	Concern	Shortage
Crane Operators, Drillers and Blasters	Concern	Concern	Surplus
Electrical Trades and Telecommunication Occupations	Concern	Concern	Shortage
Heavy Equipment Operators	Concern	Concern	Surplus

Occupational Cluster	2003	2005	2015
Human Resources and Business Service Professionals	Concern	Concern	Surplus
Labourers in Processing, Manufacturing and Utilities	Concern	Concern	Surplus
Legislators and Senior Management	Concern	Concern	Surplus
Library, Correspondence and Related Information Clerks	Surplus	Concern	Shortage
Machine Operators and Related Workers in Chemical, Plastic and Rubber Processing	Surplus	Concern	Shortage
Machine Operators and Related Workers in Metal and Mineral Products Processing	Concern	Shortage	Surplus
Machinists and Related Occupations	Concern	Concern	Shortage

Occupational Cluster	2003	2005	2015
Mail and Message Distribution Occupations	Concern	Concern	Shortage
Managers in Communication (except Broadcasting)	Concern	Concern	Surplus
Managers in Engineering, Architecture, Science Information Systems	Concern	Concern	Surplus
Managers in Financial and Business Services	Concern	Concern	Surplus
Managers in Manufacturing and Utilities	Concern	Concern	Shortage
Managers in Primary Production (except Agriculture)	Concern	Concern	Shortage
Managers in Protective Service	Concern	Concern	Surplus

Occupational Cluster	2003	2005	2015
Mine Service Workers and Operators in Oil and Gas Drilling	Concern	Concern	Surplus
Office Equipment Operators	Surplus	Concern	Shortage
Physical Science Professionals	Concern	Shortage	Surplus
Plumbers, Pipe Fitters and Gas Fitters	Concern	Shortage	Shortage
Policy and Program Officers, Researchers and Consultants	Concern	Concern	Surplus
Primary Production Labourers	Concern	Concern	Surplus
Printing Press Operators, Commercial Divers and Other Trades and Related Occupations, Not Elsewhere Classified	Concern	Concern	Surplus

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Occupational Cluster	2003	2005	2015
Public Works and Other Labourers, Not Elsewhere Classified	Concern	Surplus	Surplus
Recording, Scheduling and Distributing Occupations	Concern	Concern	Shortage
Sales and Service Supervisors	Concern	Concern	Shortage
Sales, Marketing and Advertising Managers	Concern	Concern	Surplus
Secretaries, Recorders and Transcriptionists	Surplus	Concern	Surplus
Stationary Engineers and Power Station and System Operators	Concern	Shortage	Shortage
Supervisors, Mining, Oil and Gas	Concern	Concern	Surplus

Occupational Cluster	2003	2005	2015
Supervisors, Processing Occupations	Concern	Concern	Shortage
Technical Occupations in Architecture, Drafting, Surveying and Mapping	Surplus	Shortage	Shortage
Technical Occupations in Civil, Mechanical and Industrial Engineering	Surplus	Concern	Shortage
Technical Occupations in Computer and Information Systems	Surplus	Concern	Surplus
Technical Occupations in Physical Sciences	Surplus	Concern	Shortage
Trades Helpers and Labourers	Surplus	Concern	Surplus
Train Crew Operating Occupations	Concern	Shortage	Shortage

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Occupational Cluster	2003	2005	2015
Underground Miners, Oil and Gas Drillers and Related Workers	Concern	Shortage	Surplus
Writing, Translating and Public Relations Professionals	Concern	Concern	Surplus